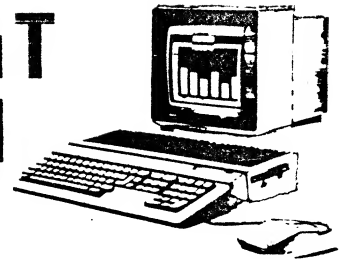


H.A.C.K.

for all Atari computers

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ALF CRUNCH A REVIEW

Those of us who are experienced telecommunicators are quite familiar with the ARC family of disk file compression programs. The most widely used of the 8-bit versions of the ARC program has been, and remains to be, ARC version 1.2 (the archiver) and ARCX version 1.2 (the dearchiver). Two very excellent programs written in C by Ralph Walden of the Atari Computer Enthusiasts of Eugene, aka ACE. Almost every BBS worth its salt uses this program to compress its files not only to make them take up less space, but also to save time on file transfers. A smaller program simply takes less time to send or receive. Of course, since the file is compressed, or archived, it isn't runnable until it's dearched with the ARCX program.

ARC and ARCX are great programs but they have their small problems. They are slow and sometimes show unexplainable CRC errors when dearching. This frustrates and detracts from what is otherwise a great program. There was none better, that is, until now.

ALFCRUNCH is here. Despite its cute name it has nothing to do with the furry wise guy from the planet Melmac. ALFCRUNCH consists of two programs, LZ.COM, the archiver, and DZ.COM, the dearchiver. Files are manipulated the same way as the ARC programs do it but they are not compatible. The LZ program compresses programs slightly more than does ARC.COM, or anywhere from a few percent to almost 70%, all depending on file type and save method used. The DZ program works as claimed - there isn't much to say except that it works. All of this sounds good but so what? Why change for a few percent?

The reason to change is speed. ALF programs are at least 10 times faster than the ARC programs. Sometimes they are even quicker! Programs which may have taken several minutes to process are done in seconds with ALF. In fact the first time I tried ALF I thought it didn't work...but it does! Reason enough to change? Not yet? Well, ALF is free. Get it from your club PD library or download it from SLOWPOKE!

RANDOM NOTES

A letter from a Canadian reader:
Dear Sirs,

I am a professor of Mathematics at the University of British Columbia in Vancouver. On a visit to my mother's house in Salem I picked up a copy of HACK for July '88. In the Random Notes I noticed some comments about the ST which I believe are wrong. 1st, you mention the Atari PC clone as "Xapomware." It does exist and can be bought at at least 5 different stores in Vancouver. I have seen it. The price is \$799 Canadian, which is about \$650 US. It's been on sale at least 6 months. Concerning the Atari Laser Printer. The computer group at TRIUMF, the linear accelerator run by U.B.C., the University of Alberta, and Simon Fraser University uses the printer attached to a 1040 because it is faster than the others. TRIUMF has a large number of Atari 1040s and Mega 40. I have watched the speed of a printout and it's much faster than that used in our Mathematics office. We have a NEC there. I can't recall the actual speed since I wasn't planning on writing this then. It seems like it printed a page of mathematics, full of symbols, in less than one minute.

I have a Mega 2. I have a program for terminal emulation which emulates a VT640 or VT100. This was written by people at Los Alamos & TRIUMF. This is public domain software.

One last note. Software Pipeline wanted \$100 for PC ditto. I got it in Van., BC for \$70 Can., ie \$56 US. That is a bit much! It's strange there are no Atari dealers in Salem. There are 8 or so in Vancouver. My Mega 2 has the new ROMs and Blitter Chip and works great. I use Word Up as a word processor and find it, together with FONTZ! the best available for word processing.

If you want more info write me at Stanley L. Page
4055 W 13th

Vancouver, BC V6R-2T3

I hope that MR. PAGE doesn't mind having his letter published. I hope you found it as interesting as did I. Me? I'm thinking about taking a little trip to Vancouver. A beautiful city!



SPECIAL NOTICE

SEPTEMBER MEETING: WEDNESDAY SEPTEMBER 14 AT 7:00 PM
PGE ROOM - SALEM PUBLIC LIBRARY



FORTH FOR THE ST

PART TWO

Depending on your good fortune, FORTH can be quite easy or rather difficult to learn. Simplicity is the driving force behind the language so you will not have to spend hours on end memorizing complex syntax and bizarre exceptions. Yet FORTH differs from other languages in its approach to the various aspects programming. This may throw off the old hand who will have to do some unlearning in order to understand these differences. In either case, all of the help that you can get your hands on will be of benefit. Therefore, in addition to the book *STARTING FORTH*, by Leo Brodie, which all prospective FORTH users should read, we will here present a bit of information about two fundamental FORTH concepts, the stack and words. First of all I will discuss the stack.

The stack is just that, a stack which lies, strangely enough, inside the computer. This stack is composed of numbers which can be thought of as being piled, one on top of another, much as would be a stack of books in a library. If you were to place a book upon this tower of tomes then that book would be the most easily accessed of the stack whereas the bottom book could not be removed without first removing those stacked on top of it. You would have to remove the object last placed upon the stack in order to get the objects placed there before it was. In the same sense, numbers within a stack are placed one on top of another in the computer's stack. The last number placed in the stack is the first one out. The second to last is the second one out, and so on. Quite simply then, the stack is just a pile of numbers inside the computer. (The explanation of which is beyond the scope of this article.) So how does one place numbers in the stack? Well, in FORTH one simply types a number on the keyboard, presses RETURN, and the value typed is entered into the stack. Sounds like Assembly Language, doesn't it? But in FORTH you don't have to enter commands like `MOVE #23, -(A6)` or even `PUSH #23`. All that is necessary

is to interactively key in 23. For an example, say you wish to enter three numbers, 3, 6, and 9 into the stack. You just type a 3 RETURN, 6 RETURN, and 9 RETURN. You now have, in first-in-last out order, 9, 6, and 3. Easy, right?

But, what does this have to do with anything? Well, this is where the FORTH word comes in. Words take the numbers off the stack and use them to perform those little jobs which a computer does so well. There are many words in the FORTH language; we'll use a simple one, `."`, to demonstrate this idea. The word `."` (a period) will take a number off the stack and draw it onto the video screen when typed in. This is a super simple description of the stack and words. As a further bit of explanation it can be said that the stack is really a temporary data or information storage area. Words are used to get at and manipulate the numbers within that stack. Since all numbers in a computer are binary, the numbers in the stack can be made to represent numbers or characters. They can be added, subtracted, divided, multiplied, squared, etc. In the ST, depending upon the version of FORTH, stack numbers can be up to 32 bits, signed, with a value of `-2147483648` to `+2147483647` or unsigned from `0` to `4294967296`. A few FORTH words can be used to perform functions which might take several lines in BASIC. FORTH may sound really confusing until you start to understand stack manipulation. Then it seems easier.

Does FORTH have any real problems? It depends, again, upon your point of view. Perhaps its most glaring problem is that number manipulation is entered in Reverse Polish Notation. This is the same system used in PASCAL and HP calculators. It is actually a very logical system but one that's against the way most of us learn to manipulate numbers. In RPN the standard math formula `a+b+c*(d+e*x*y)` would become `a b c d e x y * + * +`. Say what???

The tidbits of FORTH knowledge I've presented here will be made more clear to you if you read one of the many good books available on FORTH. The Salem Public Library has many. FORTH may seem to be a strange language but it isn't really overly complex and it is quite powerful and versatile.

Why not give it a try?

LOCAL BBS NUMBERS

SALEM/PORTLAND AREA

The following Salem and Portland area Bulletin Board Systems and Public Domain Software Exchanges all support the 8-bit Atari, the ST, or both. Many support other computers as well.

BOARD	Phone #	supports
SLOWPOKE BBS	585-8793	Atari
POPCORN SCHOOL	585-9595	Atari
Renegade 1	398-3811	Many types
SPL #1	588-6138	All
SPL #2	588-6881	All
Beilke's	378-7615	All
CINDERELLA	399-9861	Atari

ACE (Eugene)	1-343-4352	Atari
PAC 1 (Ptld)	1-245-9485	Atari
PAC 2 (Ptld)	1-238-7138	Atari
Q-Meg (Ptld)	1-667-2242	Atari +
Atarian (Ptld)	1-245-9738	ST
IBBS (Ptld)	1-292-1321	ST

All of the above listed BBSs are available for your use. Some are semi-private but are easy to register onto. All others are public boards, open to anyone with a modem.

The Salem Public Library has an online catalog open to the general public. You can call as long as you have a 1200 baud capable modem AND a VT100 or ADS Viewpoint emulator. There are 4 numbers: 399-5259 399-5260 399-5261 399-5261
The password is CCRLS.

HACK STAFF

Dan Johnson
Editor
585-8793

Steven Barnes
8-bit Librarian
873-4590

Jerry Isaac
ST Librarian/Coordinator
623-8260



HACK is looking for articles on the ST computers.

If you would like to submit an article on software/hardware/etc on any Atari computer model, call 585-8793 (after 7pm) for details

OR you may submit a text file on disk or a printed copy (max 2 pg) to:
Dan Johnson
4865 Pennsylvania Ave SE
Salem, OR 97301

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CLASSIFIED ADS:

Atari HD204 20 meg hard drive for the ST. Excellent condition. Formatted and ready to go for only \$450.00
Ken Romig 588-0483 after 5:00pm, only

ATR8000 Interface with 64K. Use your 8-bit with generic disk drives and printers. This 64K model will run CP/M for you! Excellent condition. \$150.00
Jerry Isaac 623-8260 (Dallas)

CALLERS WANTED: Popcorn School BBS at 585-9595. Fri.-Sun. 7pm - midnight.

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